

Utilizing CODIS for Evidence Obtained from Sexual Assault Kits

The information in this brief applies to cold case sexual assaults as well as current case sexual assaults. Mentions of sexual assault apply to both types of sexual assault cases.

One of the main goals of testing sexual assault kits (SAKs) is to enter foreign DNA profiles into the Combined DNA Index System (CODIS) in an attempt to identify the potential perpetrator(s). Maximizing the use of CODIS has been found to have other advantages—such as linking crimes together, helping refute claims, identifying criminal patterns, and decreasing concerns regarding public safety.

CODIS Defined

CODIS is the software management program and hardware used to link DNA databases at the local, state, and national levels. Recommendations for the creation and oversight of a national database were incorporated into the DNA Identification Act of 1994 to provide investigative leads in unsolved cases. The database continues to be supported based on the number of investigations aided and the number of hits. As of May 2019, CODIS has assisted in more than 457,450 investigations and produced over 468,156 hits.¹

Types of Hits

By testing SAKs, both forensic hits and offender hits will be generated in CODIS. A forensic hit occurs when a DNA profile from the SAK/crime scene matches a DNA profile from another SAK/crime scene, thus linking two crimes together. An offender hit occurs when a known reference sample (offender or arrestee) matches a DNA profile entered from a SAK/crime scene, thus identifying a possible perpetrator.

Provisions for Uploading

A laboratory entering DNA profiles into CODIS must abide by the National DNA Index System (NDIS) handbook, although each laboratory may have unique provisions based on local and state legislation. Therefore, agencies around the United States may have different qualifying elements for uploading a DNA profile. At the NDIS level, considerations for uploading a DNA profile include the following²:

1. The evidence has originated from or can be associated with the crime scene. Examples include a SAK collected from the victim, the victim's clothing at the time the crime

occurred, and items such as bedding collected from the crime scene.

2. Any DNA profile foreign to the victim that is obtained from the previously mentioned items must be believed to be attributable to an alleged perpetrator.
3. To have confidence in the foreign DNA profile that will be submitted to CODIS, an attempt to collect and process elimination samples, such as consensual partners, should be completed and documented. The DNA profiles generated from elimination samples will not be entered into CODIS but will be used to verify any alleged foreign DNA.
4. The FBI sets standards for the acceptance of DNA profiles to reduce the chance of a false hit being generated. For example, a DNA mixture or partial profile submitted to NDIS shall have at least eight CODIS core loci (i.e., locations in the DNA) and have a statistical match rarity of 1 in 10 million at moderate stringency. Local and state databases may have lower stringencies or qualifications established by protocol based on the population size of their databases.

Items taken directly from a possible suspect—such as a suspect kit—are not considered forensic samples and, in general, will not be uploaded into CODIS. As the database grows and statistical evaluations are updated, acceptance criteria may change over time. For example, the core CODIS locations required for submittal to NDIS expanded from 13 locations to 20 locations; this change became effective in 2017.³

Processing Non-Stranger Cases

Non-stranger cases, where the suspect has been identified or admits consensual sexual contact with the victim, still should be processed for DNA. In these instances, the primary purpose of DNA testing is to corroborate events of the sexual contact and, when a DNA profile is entered into CODIS, to determine whether cases can be linked.

Linking cases together can be extremely important for the investigation and prosecution of the case. Entering profiles from non-stranger cases into CODIS may develop trends such as identifying criminal sexual patterns, identifying suspect-to-stranger cases already in CODIS, and helping solve future crimes. All of these trends can be critical for successful prosecution. One non-stranger case alone may prove difficult to prosecute, but linking several cases may lead to a conviction.

Processing “Expired” Statute of Limitations Cases

Although the utilization of CODIS applies to both cold and current cases, the following information regarding the statute of limitations (SOL) applies only to cold cases.

In some jurisdictions, the SOL exists for sex crimes, which can limit the time in which a criminal charge can be filed. If the SOL has expired, the SAK may be viewed as no longer prosecutable as a crime and—in some jurisdictions—may not be processed for DNA or uploaded into CODIS. However, uploading foreign DNA profiles generated from expired SOL cases can help connect crimes, identify patterns of criminal behavior, and even solve future crimes. An analysis of data from SAKs tested in Detroit, for example, determined that DNA was obtained with equal success from SAKs in both expired and non-expired SOL cases. Upon CODIS upload, both categories of cases also produced equivalent CODIS hit rates.⁴

CODIS hits generated from expired SOL cases may identify a possible perpetrator who is in prison for other crimes or is deceased, which can reduce concerns of a possible threat to public safety. In addition, these cases can provide investigative leads in other crimes for which the perpetrator is unknown.

When an SOL is approaching expiration, some agencies also have been successful in issuing “John Doe” warrants or indictments when a unique DNA profile is obtained from a SAK but the perpetrator is not immediately identified.⁵ This type of warrant makes the case active and, in some jurisdictions, disqualifies the time limit on the SOL.

Conclusions

Opportunities that support the submission and testing of SAKs—along with investigation of sexual assault cases—have led to best practices for resolving sexual assault cases. One such practice is recognizing the value of testing evidence from non-stranger cases. In Detroit, a sampling of data from completed SAKs determined that DNA collected from cases in which the victim did not know the perpetrator had an equivalent likelihood of producing CODIS hits as cases in which the victim knew the perpetrator. This trend demonstrates that non-stranger rapes add value by populating the CODIS database.⁶

Multidisciplinary teams must understand any jurisdiction-specific limitations for CODIS use. However, reviewing current procedures and verifying foreign profiles developed from SAKs are critical to having the best opportunity for DNA profiles to be uploaded into CODIS. Whereas a prioritization scheme may need to be written to utilize resources, excluding certain types of cases—such as non-stranger and expired SOL cases—could limit the entire project’s impact and decrease chances of solving future crimes.

Maximizing the use of CODIS can link sexual assault to other violent crimes, identify serial offenders, identify stranger rapes based on acquaintance rapes, exonerate the wrongly convicted, and prevent further victimization.

References:

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